Sheep Creek Phase 4

Project ID: 3606
Status: Current
Fiscal Year: 2017
Submitted By: N/A
Total Acres: 1,427

Project Manager: Riley Bergseng
PM Agency: U.S. Forest Service
PM Office: Spanish Fork Ranger District
Lead: U.S. Forest Service
WRI Region: Central

Description:

Improve the watershed conditions and mule deer winter range by reducing juniper density and canopy cover on 1427 acres through mastication and lop and scatter.

Location:

North of highway 6 east of rays valley road

PROJECT NEED

Need For Project:

The need for this project comes from the findings of the recently completed Soldier Creek Watershed Assessment. The juniper in this area is invading from the steep, rocky slopes, where it is most commonly found, into the sage steppe community, where naturally occurring fire usually would have kept it out. This change from a sage steppe community to a juniper thicket would increase the intensity/severity of a wildfire should an unplanned ignition occur. This increased severity could lead to a loss of crucial mule deer winter/spring range in the area. The encroachment of juniper is limiting the diversity of plant and animal species within the area. The invasion of junipers excludes other plant species by limiting resources (water, light and nutrients) available to the understory vegetation. As other plant species are excluded, ground cover is decreased and the potential for soil erosion is increased. The loss of plant species diversity limits forage availability for animal species. Thick continuous canopy discourages use by many wildlife species because of the lack of herbaceous understory forage production. Wildlife species benefit from openings in the shrub/tree canopy and from a diversity of age and structural classes of shrubs/trees. Mule deer are browsers that primarily eat shrubs and other woody materials. Juniper out competes the understory vegetation and reduces the amount of browse available to deer. Lack of understory vegetation can lead to increased soil loss through soil erosion. As soil erosion is increased, stream sedimentation increases and water quality decreases. The encroachment of juniper and the loss of ground cover can also increase the potential for the spread of noxious weeds.

Objectives:

Improve the watershed conditions through a reduction of juniper canopy cover on 1427 acres through mastication and lop and scatter.
Improve Mule deer, Elk winter range as well as Moose habitat.
Improve unsuitable fire frequency and intensity through alteration of fuels

Threats / Risks:

* If juniper density continues to increase unchecked, then the understory will decrease and soil erosion will increase, degrading watershed conditions and water quality.
* The area is currently at high risk for a high intensity/severity wildfire occurring with unwanted fire effects, such as soil erosion, weed expansion, and loss of wildlife habitat.
* Weeds are a threat in this area, especially as ground cover decreases.
* As described in the Project Need, there is a significant risk of losing critical mule deer winter range as habitat conditions degrade and the risk of an unwanted wildfire increases (with juniper densities).

Relation To Management Plan:

This project will help reach 20 goals, objectives and/or strategies of the following planning documents.
-The project area occurs within the sagebrush steppe type, one of the key habitats identified in the WAP. There are multiple wildlife species identified within the Utah Wildlife Action Plan that identify this project as critical habitat for wildlife including Mule deer, elk, moose and the band-tailed pigeon

-Treatments lie within Central Region UWRI focus areas.

This project will help address the following goals, objectives and strategies of the mule deer and elk management plans:

Statewide Deer Plan

Habitat Goal: Conserve, improve, and restore mule deer habitat throughout the state with emphasis on crucial ranges.
Habitat Objective 1: Maintain mule deer habitat throughout the state by protecting and enhancing existing crucial habitats and mitigating for losses due to natural and human impacts.
Strategies
c. Work with local, state and federal land management agencies via land management plans and with private landowners to identify and properly manage crucial mule deer habitats, especially fawning, wintering and migration areas.
Habitat Objective 2: Improve the quality and quantity of vegetation for mule deer on a minimum of 500,000 acres of crucial range by 2019.
Strategies
d. Initiate broad scale vegetative treatment projects to improve mule deer habitat with emphasis on drought or fire damaged sagebrush winter ranges, ranges that have been taken over by invasive annual grass species, and ranges being diminished by encroachment of conifers into sagebrush or aspen habitats, ensuring that seed mixes contain sufficient forbs and browse species.
Statewide Elk Plan
B. Habitat Management Goal: Conserve and improve elk habitat throughout the state.
Habitat Objective 1: Maintain sufficient habitat to support elk herds at population objectives and reduce competition for forage between elk and livestock.
Strategies:
C. Watershed Restoration Initiative
a) Increase forage production by annually treating a minimum of 40,000 acres of elk habitat.
b) Coordinate with land management agencies, conservation organizations, private landowners, and local leaders through the regional Watershed Restoration Initiative working groups to identify and prioritize elk habitats that are in need of enhancement or restoration.

Wildlife Management Unit 17 Plans
Deer plan
Habitat Improvement
Ã¯ÂÂ§ Reduce expansion of Pinyon-Juniper woodlands into sagebrush habitats and improve habitats dominated by Pinyon-Juniper woodlands by completing habitat restoration projects like lop & scatter, bullhog and chaining.

- Future habitat work should be concentrated on the following areas.
- North side of hwy 6 in the Sheep Creek drainage.

Elk Plan
Habitat

Actions to Remove Habitat Barriers
- Cooperate with USFS, BLM, & Ute Tribe to increase vegetative under story and reduce Pinyon/Juniper invasion of the sagebrush step zone to increase winter forage to reduce depredation on private property.

-The proposed project will address the following goals and objectives of the Division of Wildlife Resources most recent strategic management plan:
-Resource Goal: expand wildlife populations and conserve sensitive species by protecting and improving wildlife habitat.

-Objective 1: protect existing wildlife habitat and improve 500,000 acres of critical habitats and watersheds throughout the state.
-Objective 3: conserve sensitive species to prevent them from becoming listed as threatened or endangered.

-The Soldier Creek Watershed Assessment states: 1)Remove juniper to increase sagebrush habitat and forb and grass cover. 2) Remove juniper to decrease soil erosion potential and increase soil quality. 3) Reduce juniper to increase wildlife habitat and hunting opportunities.

-The Upper Spanish Fork Management Area as defined by the 2003 Land and Resource Management Plan for the Uinta NF has the following sub-goals of the Forest Plan:

-Sub-goal 2-8: "Ecosystem resilience is maintained by providing for a full range of seral stages and age classes (by cover type) that achieve a mosaic of habitat conditions.
-Sub-goal-2-23 Areas identified as being of special concern for habitat such as big game winter range, big game natal areas,.... and greater sage grouse breeding areas in the Vernon Management Areas are maintained and, where potential exists, improved or expanded.
-Sub-goal-2-25(G-2-25)Maintain stable and upward conditions in big game winter range and improve downward trend sites

-Utah Wildlife Action Plan, 2015-2025 Publication draft p.386 appendix threats 7.1.1 Inappropriate fire frequency and intensity.

Utah Smoke Management Plan (Revised 2006)
1)Mimimize or prevent smoke impacts to such a degree possible in order to protect public health, public safety, and visibility.
2)Encourage the development and use of alternative methods to burning for disposing of or reducing the amount of wildland fuels on lands in the state.

Wasatch Front Fuels Assessment Report 2002.
1)Strive for joint cooperation between federal agencies, municipalities and private landowners to reduce fuels contributing to unwanted wildland fire impacting landscapes along the Wasatch Front.

Fire / Fuels:

The implementation of this project would help minimize the risks to private land, structures, and natural resources, from potential wildland fires by: 1) altering fire behavior from a crown fire to a surface fire, 2) increasing native plant populations and their resiliency, 3) reducing the risk of weed expansion, and 4) protecting critical mule deer habitat from unwanted fire effects. The current fuel load and arrangement is likely to support a relatively severe crown fire due to continuous, dense canopies of juniper and oakbrush. The proposed treatment would alter fire behavior from a crown fire to a more controllable surface fire by breaking up the continuity of aerial fuels. This alteration in fire behavior not only enhances firefighter and Forest visitor safety, but increases the ability of the plant community to recover post-fire by reducing the fire severity. In addition, Spanish Fork Canyon, Sheep Creek and Soldiers Summit , all nearby communities, are listed as some of Utah's Communities at Risk (Utah Division of Fire, Forestry and State Lands, 2013). The 2013 Northern Utah Regional Wildfire Protection Plan identifies this area as a moderate - high risk area for wildfire (Utah Division of Fire, Forestry and State Lands, 2013).

Water Quality/Quantity:

This project would maintain or improve water quality and increase water quantity.
* There is a lot of variability in the vegetation response of treatments in pinon-juniper ecosystems.
* For water yields, the potential for increasing water yields through conversion treatments is poor because these woodland areas have low precipitation and high evapotranspiration. If grasses replace pinon-juniper, the grasses will use the water that is available and no net water is usually realized.
* If there is little understory vegetation, conversion from pinon juniper to grasses may reduce soil erosion from denser ground cover. This may improve water quality from reduced soil erosion and sedimentation.

Compliance:

2 PM Archaeology, Archaeology clearances completed, Dec 10 2014 / 6 NEPA, NEPA completed, Dec 10 2014

Methods:

Juniper mastication and lop & scatter will be carried out through a contract, starting in the fall of 2016.

Monitoring:

Established vegetation plots will be revisited and walk through surveys will be completed at least once post-treatment. Data collection will include ocular estimates of shrub and ground cover, and juniper density measurements. A monitoring report will be completed and uploaded to the project database.

Partners:

DWR, DNR have partnered with us in improving the condition class on the previous 3 phases of the Sheep Creek mastication project. We have received funding through the UPCD/WRI funding proposal process on the previous treatments and it is critical to the funding for this one. This will be the final one for mastication

Future Management:

Grazing management will occur through a rest-rotation grazing system.

Domestic Livestock Benefit:

Available forage is expected to increase post-treatment with the reduction in juniper canopy density.

BUDGET

WRI/DWR	Other	Budget Total	In-Kind Total	Grand Total
$196,885.00	$106,015.00	$302,900.00	$38,800.00	$341,700.00

Item	Description	WRI	Other	In-Kind	Year
Contractual Services	Mastication FS to pay 35% and requesting 65% from UPCD/WRI at $275/acre	$163,735.	$88,165.0	$0.00	2017

Item	Description	WRI	Other	In-Kind	Year
Personal Services (permanent employee)	FS personnel for contract preparation, oversight and coordination	$0.00	$0.00	$5,000.00	2017
Contractual Services	Lop & Scatter FS to pay 35% and requesting 65% from UPCD/WRI at 100/acre	$33,150.0	$17,850.0	$0.00	2017
NEPA	NEPA Archeology clearence	$0.00	$0.00	$33,800.0	2014

FUNDING

WRI/DWR	Other	Funding Total	In-Kind Total	Grand Total
$196,885.00	$106,015.00	$302,900.00	$38,800.00	$341,700.00

Source	Phase	Description	Amount	Other	In-Kind	Year
Habitat Council Account			$30,000.0	$0.00	$0.00	2017
Allocation		Percent of Total				
Big Game		100%				
Upland Game		0%				
Waterfowl		0%				
Sport Fish		0%				
Nongame Fish		0%				
Nongame Wildlife		0%				
FFSL (pre-suppression)	N565		$20,000.0	$0.00	$0.00	2017
USFS-WRI	N664		$70,000.0	$0.00	$0.00	2017
MDF	NS652		$20,000.0	$0.00	$0.00	2017
RMEF	NS652		$10,000.0	$0.00	$0.00	2017
Safari Club International	NS652		$5,000.00	$0.00	$0.00	2017
Utah Bowman's Association	NS655		$3,000.00	$0.00	$0.00	2017
SFW	NS652		$10,000.0	$0.00	$0.00	2017
MDF Expo Permit	NS655		$10,000.0	$0.00	$0.00	2017
USFS		Contractual Oversite and 35% cost of project	$0.00	$106,015.	$38,800.0	2017
Federal Aid (PR)			$18,885.0	$0.00	$0.00	2017

EXPENSE

WRI/DWR	Other	Expense Total	In-Kind Total	Grand Total
$0.00	$0.00	$0.00	$0.00	$0.00

Source	Phase	Description	Amount	Other	In-Kind	Year
Habitat Council Account		N/A	$0.00	$0.00	$0.00	
Allocation		Percent of Total				
Big Game		100%				
Upland Game		0%				
Waterfowl		0%				
Sport Fish		0%				
Nongame Fish		0%				
Nongame Wildlife		0%				
FFSL (pre-suppression)	N565	N/A	$0.00	$0.00	$0.00	
USFS-WRI	N664	N/A	$0.00	$0.00	$0.00	

Source	Phase	Description	Amount	Other	In-Kind	Year
MDF	NS652	N/A	$0.00	$0.00	$0.00	
RMEF	NS652	N/A	$0.00	$0.00	$0.00	
Safari Club International	NS652	N/A	$0.00	$0.00	$0.00	
Utah Bowman's Association	NS655	N/A	$0.00	$0.00	$0.00	
SFW	NS652	N/A	$0.00	$0.00	$0.00	
MDF Expo Permit	NS655	N/A	$0.00	$0.00	$0.00	
USFS		N/A	$0.00	$0.00	$0.00	
Federal Aid (PR)		N/A	$0.00	$0.00	$0.00	

SPECIES

Species	"N" Rank	HIG/F Rank
Mule Deer		1
Threat		Impact
Inappropriate Fire Frequency and Intensity		High
Elk		2
Threat		Impact
No Threat		NA
Ruffed Grouse		2
Threat		Impact
No Threat		NA
Moose		3
Threat		Impact
No Threat		NA
Band-tailed Pigeon	N4	4
Threat		Impact
Data Gaps - Unknown Population Status		NA
Inappropriate Fire Frequency and Intensity		Low

HABITATS

Habitat
Mountain Sagebrush

Threat	Impact
Inappropriate Fire Frequency and Intensity	Medium
Invasive Plant Species – Non-native	Medium
Problematic Plant Species – Native Upland	Very High

PROJECT COMMENTS

Comment 02/01/2016 Type: Project Commenter Jimi Gragg

Glad to see the PJ being pushed back in this area, please keep at it for the next decade or so! Ha ha but not kidding. I think a couple of your threats (e.g., utility lines, camping, data gaps) are not relevant to your

methods and objectives, & should be removed. For your species you could probably add "inappropriate fire regime" and "problematic native plants" as threats you are reducing with this money.

Comment 02/02/2016 Type: Project Commenter Alan Clark

I could not find the breakdown of L&S vs mastication. I see two polygons on map but did not see a treatment tied to each.

Comment 02/02/2016 Type: Project Commenter Brad Jessop

Riley,
Similar comment to Alan's. Please break down the acres by treatment type (clarify in the budget too). Also, I'm confused by the "affected area" lines to the east of the polygons that appear to be stream channels. Are these areas targeted for treatment? If so, which? Bullhog or lop and scatter?

Comment 02/02/2016 Type: Project Commenter Alison Whittaker

Approved to go forward to ranking - CRO UPCD - Exception - update map.

Comment 02/03/2016 Type: Financial Commenter Riley Bergseng

Please transfer funds from USFS (Other) to UPCD/WRI. We would like the state to manage funds, this will allow us to implement the project better, due to funding allocations and timeline.

COMPLETION

Start Date:

End Date:

FY Implemented:
2017

FY Completed:

Final Methods:
N/A

Project Narrative:
N/A

Future Management:
N/A

Map Features

ID	Feature Category	Action	Treatment/Type
5225	Terrestrial Treatment Area	Vegetation removal / hand crew	Lop and scatter
5228	Terrestrial Treatment Area	Vegetation removal / hand crew	Lop and scatter
5229	Terrestrial Treatment Area	Bullhog	Full size